

## CLAIMS

1. A process for forming a plurality of substantially transparent electrodes upon a substrate, the process comprising:

forming on the substrate, in order, a high index layer, a metallic conductive layer, and a top high index layer having a conductivity of at least about 400 ohms/square and

patterning the top layer and the conductive layer to form a plurality of discrete electrodes from the metallic conductive layer.

2. A process according to claim 1 further comprising connecting a plurality of conductors to portions of the top layer overlying the discrete electrodes.

3. A process according to claim 1 wherein the substrate comprises a synthetic resin.

4. A process according to claim 1 wherein the high index layer adjacent the substrate is an electrically insulating layer.

5. A process according to claim 1 wherein the high index layer adjacent the substrate comprises at least one of indium oxide, titanium dioxide, cadmium oxide, gallium indium oxide, niobium pentoxide, indium tin oxide and tin dioxide.

6. A process according to claim 1 wherein the high index layer adjacent the substrate is formed by sputtering.

7. A process according to claim 3 wherein the high index layer adjacent the substrate is formed at a temperature not greater than about 170°C.

8. A process according to claim 1 wherein the conductive layer comprises at least one of gold, silver and a gold/silver alloy.

9. A process according to claim 1 wherein the conductive layer is formed by sputtering.

10. A process according to claim 3 wherein the conductive layer is formed at a temperature not greater than about 170°C.

11. A process according to claim 1 wherein the top layer comprises at least one of indium oxide, titanium dioxide, cadmium oxide, gallium indium oxide, niobium pentoxide, indium tin oxide and tin dioxide.

12. A process according to claim 1 wherein the top layer is formed by sputtering.

13. A process according to claim 3 wherein the top layer is formed at a temperature not greater than about 170°C.

14. A process according to claim 1 wherein the patterning is effected by laser ablation.

15. A process according to claim 14 wherein the laser ablation is effected using infra-red radiation of a wavelength in the range of about 700 to about 1200 nm.

16. A process according to claim 1 further comprising depositing upon at least one surface of the substrate, prior to the deposition of the high index layer thereon, at least one of a hard polymer coating and a layer of silica.

17. A process according to claim 14 wherein, following the patterning, the surface of the substrate is washed to remove debris from the laser ablation.

18. A substantially transparent electrode assembly comprising:  
a substrate;

a high index layer formed on the substrate;

a metallic conductive layer formed on the high index layer; and

a high index top layer having a conductivity of at least about 400 ohms/square formed on the conductive layer,

at least the top layer and the conductive layer being patterned so as to divide the conductive layer into a plurality of discrete electrodes.

19. An electrode assembly according to claim 18 having a plurality of conductors connected to portions of the top layer overlying the discrete electrodes.

20. An electrode assembly according to claim 18 wherein the high index layer adjacent the substrate is an electrically insulating layer.

21. An electrode assembly according to claim 18 wherein the substrate comprises a synthetic resin.

22. An electrode assembly according to claim 18 wherein the high index layer adjacent the substrate comprises at least one of indium oxide, titanium dioxide, cadmium oxide, gallium indium oxide, indium tin oxide and tin dioxide.

23. An electrode assembly according to claim 18 wherein the conductive layer comprises at least one of gold, silver and a gold/silver alloy.

24. An electrode assembly according to claim 18 wherein the top layer comprises at least one of indium oxide, titanium dioxide, cadmium oxide, gallium indium oxide, indium tin oxide and tin dioxide.

25. An electrode assembly according to claim 18 wherein at least one surface of the substrate bears at least one of a hard polymer coating and a layer of silica.

26. A liquid crystal display assembly comprising a liquid crystal material sandwiched between two electrode assemblies, at least one of the electrode assemblies being an assembly according to claim 18.

27. A touch screen display apparatus comprising a display screen having superposed thereover two electrode assemblies, at least one of the electrode assemblies being an assembly according to claim 18.